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| 10/563,467      | 01/04/2006  | Sergio Martins Costa | 10008.010           | 1361             |

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EXAMINER

MANOHARAN, VIRGINIA

ART UNIT PAPER NUMBER

1764

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/563,467

Applicant(s)

COSTA, SERGIO MARTINS

Examiner

Virginia Manoharan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors, e.g., typographical, grammar, idiomatic, syntax and etc. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required. [ The abstract in the PCT does not suffice].

The drawings are objected to because the drawing fails to comply with 37 CFR 1.84(p)(4). The reference characters "28" and "29" have been used to designate both "weir" (page 4, lines 11 and 12 of the preliminary amendment dated January 4, 2006). [Applicant should further check the specification that no different parts are referred to by the same number or vice versa, i.e., no different numbers are referred to by the same part].

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of

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any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The references cited in the search report filed January 4, 2006 have been considered, but will not be listed on any patent resulting from this application because they were not provided on a separate list in compliance with 37 CFR 1.98(a)(1). In order to have the references printed on such resulting patent, a separate listing, preferably on a P10-1449 form, must be filed within the set period for reply to this Office action. Applicant should address this issue in response to this office action.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a). The term "characterized by", recited in claims 1-4, is not a recitation of positive, manipulative, structural elements of an apparatus. Also, it is unclear whether the limitation(s) recited prior the "characterize by" is to be regarded as part of applicant's invention? Applicant should recite the claim in Jepson -format (if intended) to delineate that which is an improvement in the art.

b). The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The ring shell and tube evaporator;

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the ring bundle evaporator; and cylindrical bundle evaporator, for examples, must all be positively recited as structural elements of an apparatus.

c). The phrase " here named" numerously recited in the claims should be deleted as being superfluous.

d). The inconsistent used of terminology in the claims is improper. For example:

" the next stage or intermediate stage" in claim 1; as opposed to "the second stage " in claim 2, and the "succeeding stage" in claim 3 . See also the "preceding stage" in claim 4 as opposed to the first stage in claim 1.

e). The claimed "the central tube" in claim 4, line 7 lacks antecedent support in the claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over anyone of Lagana et al (4,334,954), Sephton (6,309,513) or Bitterly et al (6,695,951).

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Anyone of the above references is deemed to anticipate or renders obvious the claimed features of the apparatus. See Figure 2 of Lagana; Figs. 1-8 and the claims at cols. 13-14 of Sephton and Figs. 1-8 and the claims at col. 28-30 of Bitterly.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sephton (6,309,513) and Bitterly et al (6,695,951).

Sephton discloses substantially the apparatus as claimed. See Figs. 1-8 and the claims at cols. 13-14 of Sephton .

The apparatus of differs from the claimed invention in that claim 1, for example, recites "the last stage that is a ...bundle of vertical tubes here named Cylindrical Bundle Evaporator" . . . However, to incorporate a cylindrical bundle evaporator to a series of concentric evaporators in stages in the manner as taught by Bitterly to the apparatus of Sephton , to arrive at the claimed invention, would have been obvious to one of ordinary skill in the art for the advantages taught e.g., at col.5, lines 49-51 of the Bitterly's reference.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


- a). Williamson and Bromley et al both disclose a multistage flash evaporator with concentric arrangement.
- b). Gode discloses a desalinizing method and apparatus.
- c). Biar et al discloses a vertical falling film shell and tube heat exchanger.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (571) 272-1450.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
VIRGINIA MANOHARAN  
PRIMARY EXAMINER  
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